



Water Quality NewsFlash

Published by California Department of Transportation, Division of Environmental Analysis, Office of Storm Water Policy

December 4, 2006

Number 06-49

SF Bay Copper – Board to set site-specific objectives – On Dec. 7, the San Francisco Regional Board will hold a CEQA scoping hearing on proposed amendments to the Basin Plan which will relax the copper objectives for San Francisco Bay north of the Dumbarton Bridge. The amendments will set acute and chronic site-specific objectives (SSOs) for dissolved copper and will also establish ratios of dissolved copper to total copper that will be used to compute NPDES permit effluent limits (which are based on *total* copper). In addition the amendments will include an implementation plan to ensure that copper does not increase in concentration in Bay waters. The implementation plan consists of measures to control major sources of copper, ambient monitoring, and studies to resolve remaining uncertainties regarding copper effects. In January 2005, the Board approved similar Basin Plan amendments for waters south of the Dumbarton Bridge.

In 2000, the U.S. EPA issued a regulation known as the *California Toxics Rule* or CTR which established water quality standards for toxic pollutants in most of the inland waters of California including bays. In some locations these standards may be unnecessarily restrictive. In these cases, the state may establish less restrictive “site-specific” water quality criteria (“objectives” in state terminology). Copper is present naturally in soils and waterways and is a micronutrient for both plants and animals at low concentrations; however, it may become toxic to some forms of aquatic life at elevated concentrations. The copper objectives adopted in the CTR can be overprotective of aquatic life, particularly when organic carbon is present in the water. Copper and other metals may be bound by a variety of dissolved compounds which reduces their toxicity.

The CTR’s saltwater aquatic life water quality criteria for dissolved copper are 4.8 ug/l acute (exposure for a short period of time) and 3.1 ug/l chronic (exposure for an extended [4 day] period of time). The State’s new objectives which replaced the CTR criteria for South San Francisco Bay are 10.8 ug/l (acute) and 6.9 ug/l (chronic). The changes are being advocated by sewage treatment agencies whose discharges may exceed the current objectives even taking into account dilution factors. Dissolved copper in roadway runoff averages about 15 ug/l, so copper remains a constituent of concern even with the higher standard (data from *Discharge Characterization Study Report*). Nevertheless, the change in objectives increases the potential for bringing storm water into compliance. (Note: The SWRCB has not clarified which objectives should be used to assess storm water, however, because storm water discharge is intermittent, presumably the acute objectives would be used rather than the more restrictive chronic objectives.)

The San Francisco Board has taken the lead in developing SSOs, but they are being considered elsewhere in the State. As storm water (and other) dischargers focus on water quality compliance, it is important that water quality objectives be set at levels representative of actual risk. General information on SSO procedures is posted: <http://www.swrcb.ca.gov/quality.html> (page down to: “Site Specific Water Quality Objectives”). SF Bay copper SSO information <http://www.waterboards.ca.gov/sanfranciscobay/basinplan.htm#amendments>

WQ NewsFlash is a weekly update of storm water and related news for the Department. Verify information before taking action on these bulletins. Contact Betty Sanchez, Betty_Sanchez@dot.ca.gov (916) 653-2115, or Fred Krieger, (510) 843-7889, fkrieger@msn.com with questions or to be added or deleted from e-mail list. Posted online at: <http://www.dot.ca.gov/hq/env/stormwater/publicat/newsflash/index.htm>